

Abstract

In a process for producing an aromatic carboxylic acid, a dehydrating process compacts a step for removing water from a mixture of acetic acid and water produced in the production process, and reduces the consumed energy. The process of producing an aromatic carboxylic acid has an oxidation reaction step for producing a slurry of an aromatic carboxylic acid by carrying out liquid-phase oxidation reaction of an alkyl aromatic compound with an oxygen-containing gas in a solvent containing acetic acid in the presence of an oxidation catalyst. In this process at least a portion of a mixture containing acetic acid and water produced in the production steps is separated into a permeable gas mainly comprising water and nonpermeable substances mainly comprising acetic acid using a separation membrane having water selectivity.